

Addonics

TECHNOLOGIES

SATA/IDE RAID PCI-E Controller

Model: ADI2S3GPX1-2E

User's Guide

Version 1.0

FCC Warning Statement

This equipment has been tested and found to comply with the limits for a class B digital device pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy. If not installed and used in accordance with the instructions, it may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If the equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment on and off, the user is encouraged to try and correct the interference by one or more of the following suggestions.

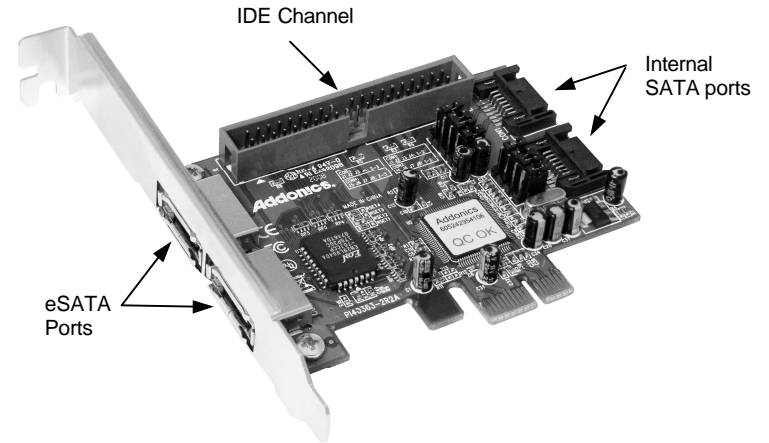
Reorient or relocate the receiving antenna

Increase the distance between the equipment and the receiver

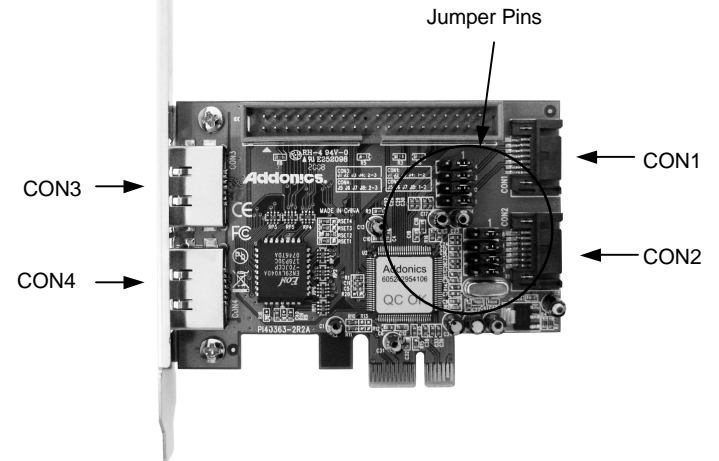
Connect the equipment to a different power outlet other than the one where receiver is connected

Consult a certified television or radio technician

Overview

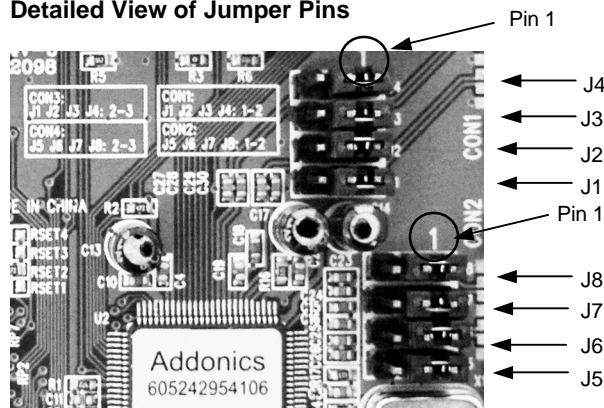


Note: The IDE devices attach to the IDE channel must be set as a master and slave pair.



Note: There are four SATA ports in SATA/IDE RAID PCI-E controller card. These ports are named CON1 to CON4. Ports CON3 & CON4 are eSATA ports and CON1 & CON2 are internal SATA ports. Changing the jumper setting on the SATA/IDE RAID PCI-E Controller card allows you to select between eSATA and internal SATA ports. By default, ports CON1 & CON2 are enabled.

Detailed View of Jumper Pins



To enable CON3 and disable CON1,
transfer jumper to pins 2 & 3 on J1, J2, J3 & J4

To enable CON4 and disable CON2,
transfer jumper to pins 2 & 3 on J5, J6, J7 & J8

Recommendations on using the ADI2S3GPX1-2E

There are two ways of configuring raid sets on the ADI2S3GPX1-2E. Use the RAID BIOS of the controller card which shows up after POST or install the JMB36X RAID Configurer in Windows to create raid volumes. The JMB36X RAID Configurer will not run when no devices are attached to the controller.

Using the RAID BIOS to create RAID Volumes

There are four configurations supported:

RAID level/Type	Configurations	Number of disks needed
RAID 0	Disk Striping	2 or 3 or 4
RAID 1	Disk Mirroring	2
RAID 0+1	Disk Striping + Mirroring	4
JBOD	Disk Concatenation	2 or 3 or 4

RAID 0 (Striping)

1. Press **Ctrl+J** when prompted to enter the RAID BIOS.
2. At the next screen select **Create RAID Disk Drive**, press **Enter**.
3. Enter RAID name, press **Enter**.
4. Use arrow keys **•** and **•** to switch the RAID level to **0-Stripe**, then press **Enter**.
5. Use arrow keys **•** and **•** to switch the disk, use the "space" key to mark the selected disk, then press **Enter**.

6. Use arrow keys **•** and **•** to select chunk size from 4K, 8K, 16K, 32K, 64K or 128K, then press **Enter**.
7. Input the RAID size, press **Enter**.
8. When asked **Create RAID on the select HDD (Y/N)?**, press Y to accept.
9. At the next screen select **Save And Exit Setup**, press **Enter**.
10. When asked **Save to disk &Exit (Y/N)?**, press Y to exit the RAID BIOS.

RAID 1 (Mirroring)

1. Press **Ctrl+J** when prompted to enter the RAID BIOS.
2. At the next screen select **Create RAID Disk Drive**, press **Enter**.
3. Enter RAID name, press **Enter**.
4. Use arrow keys **•** and **•** to switch the RAID level to **1-Mirror**, then press **Enter**.
5. Use arrow keys **•** and **•** to switch the disk, use the "space" key to mark the selected disk, then press **Enter**.
6. Input the RAID size, press **Enter**.
7. When asked **Create RAID on the select HDD (Y/N)?**, press Y to accept.
8. At the next screen select **Save And Exit Setup**, press **Enter**.
9. When asked **Save to disk &Exit (Y/N)?**, press Y to exit the BIOS.

CONCATENATION (JBOD)

1. Press **Ctrl+J** when prompted to enter the RAID BIOS.
2. At the next screen select **Create RAID Disk Drive**, press **Enter**.
3. Enter RAID name, press **Enter**.
4. Use arrow keys **•** and **•** to switch the RAID level to **JBOD-Concatenate**, then press **Enter**.
5. Use arrow keys **•** and **•** to switch the disk, use the "space" key to mark the selected disk, then press **Enter**.
6. Input the RAID size, press **Enter**.
7. When asked **Create RAID on the select HDD (Y/N)?**, press Y to accept.
8. At the next screen select **Save And Exit Setup**, press **Enter**.
9. When asked **Save to disk &Exit (Y/N)?**, press Y to exit the BIOS.

RAID 0+1 (Striping + Mirroring)

1. Press **Ctrl+J** when prompted to enter the RAID BIOS.
2. At the next screen select **Create RAID Disk Drive**, press **Enter**.
3. Enter RAID name, press **Enter**.
4. Use arrow keys **•** and **•** to switch the RAID level to **01-Stripe+Mirror**, then press **Enter**.
5. Use arrow keys **•** and **•** to select chunk size from 4K, 8K, 16K, 32K, 64K or 128K, then press **Enter**.
6. Input the RAID size, press **Enter**.
7. When asked **Create RAID on the select HDD (Y/N)?**, press Y to accept.
8. At the next screen select **Save And Exit Setup**, press **Enter**.
9. When asked **Save to disk &Exit (Y/N)?**, press Y to exit the BIOS.

Delete RAID Disk Drive

1. Press **Ctrl+J** when prompted to enter the RAID BIOS.
2. At the next screen select **Delete RAID Disk Drive**, press **Enter**.
3. Use arrow keys **•** and **•** to select the array you want to delete, use the "space" key to mark the selected array, then press **DEL**.
4. When asked **ALL DATA ON THE RAID WILL LOST!! ARE YOU SURE TO DELETE (Y/N)**, press **Y** to accept.

Solve Mirror Conflict

When a RAID set is created, metadata which includes drive connection information is written to the disk. If after a disk failure, the drive that failed was replaced by a disk that was previously part of a RAID set (or used in another system), it may have conflicting metadata. This will prohibit the RAID set from being either created or rebuilt. In order for the RAID set to function properly, this old metadata must be first overwritten with new metadata. To resolve this, from the main RAID BIOS window select **Solve Mirror Conflict**, then press **Enter**, the correct metadata, including the correct drive connection information, will be written to the replacement disk.

Rebuild Mirror Drive

If a failure on one member occurs, you will be notified by the RAID BIOS during boot. The steps below will guide you in rebuilding a failed mirror set.

1. Replace the failed drive with one of equal or greater capacity, then start the computer.
2. During boot press **Ctrl+J** to enter the RAID BIOS.
3. Select **Rebuild Mirror Drive** press **Enter**.
4. Use arrow keys **•** and **•** to select the array you want to rebuild, press **Enter**.
5. Use arrow keys **•** and **•** to select the destination disk, press **Enter**.
6. When rebuilding is finished, select **Save And Exit Setup**, press **Enter**. When asked **Save to disk &Exit (Y/N)?**, press **Y** to exit the BIOS.

Steps:

1. JMB36X RAID Configurer installation

Note: To create raid volumes and monitor the status of your raid set, you need to install the JMB36X RAID Configurer. Install the utility from the CD that came with your package.

- a. Turn computer ON. Insert Host Controller Driver Disk into CDROM.
- b. The Addonics Technologies Driver Disk window pops up.
- c. Select Other Controllers. Click the ADI2S3GPX1-2E. Extract the files into your system.
- d. Install JMB36X RAID Configurer by clicking the **Setup.exe**. Follow the instructions.
- e. After software installation, reboot the system.

2. To open the JMB36X RAID Configurer, click on the system tray the JMicon icon.



3. This will open up the JMB36X RAID Configurer.

A screenshot of the JMB36X RAID CONFIGURER application window. The window title is "JMB36X RAID CONFIGURER". At the top, there are five buttons: "Create RAID", "Create RAID from Existing Disk", "Show Disk", "Rebuild RAID", and "Remove RAID". Below the buttons is a toolbar with icons for each function. The main area is divided into two panels: "RAID LIST" and "DISK LIST". The "RAID LIST" panel is currently empty. The "DISK LIST" panel shows a table of disks.

All disks:				
Name	Capacity	Device Type	Channel	Device Priority
WDCWD800JB...	74.5304GB	HDD	3	Master
HDS728080PLA...	76.6928GB	HDD	3	Slave

At the bottom right of the window, it says "JMICON TECHNOLOGY CORP."

Driver Installation For A New Fresh Windows Install

A new installation requires a floppy disk for the driver installation. To make this floppy disk, copy the contents of the "Drivers\JMB36X\WIN2K_XP_2003_VISTA\Floppy32" folder, found on the driver CD, onto a blank floppy disk then follow the directions below.

1. Setup the RAID Array prior to Windows installation.
2. Follow Microsoft's Windows installation procedure.
3. Restart the computer when prompted by Windows' installation.

For Windows® 2000, XP and Server 2003

4. At the Windows Setup screen, press **F6** to install the RAID driver.
5. When prompted, press **S** to specify the location of the driver.
6. Insert the floppy disk, then press **Enter**.
7. Select **(Windows 2000) RAID Driver for JMicron JMB363 Controller** or **(Windows XP/2003) RAID/AHCI Driver for JMicron JMB36X Controller**, then press **Enter**.
8. Press **Enter** to finish driver installation, then follow the on-screen instructions to complete the Windows installation.

For Windows® Vista

4. At the Windows Setup screen, press **Load Driver** to install the driver.
5. Insert the floppy disk, please select **JMicron JMB36X Controller (A:\jraid_f.inf)**, then press **Next**. (Change **A:** to match your floppy drive letter)
6. Follow the on-screen instructions to complete the Windows installation.

For Windows® XP-x64/Server 2003-x64

4. At the Windows Setup screen, press **F6** to install the driver.
5. When prompted, press **S** to specify the location of the driver.
6. Insert the floppy disk, then press **Enter**.
7. Select **(Windows XP/2003 x64) RAID/AHCI Driver for JMicron JMB36X Controller**, then press **Enter**.
8. Press **Enter** to finish driver installation, then follow the on-screen instructions to complete the Windows installation.

To Verify Driver Installation

1. Right click **My Computer** and click **Manage**.
2. Select **Device Manager**.
3. Look for the following:

Windows® 2000/XP/2003: Double click **SCSI and RAID Controller:**

-**JMicron JMB36X Controller** should be displayed

Windows® Vista: Double click **Storage controllers:**

-**JMicron JMB36X Controller** should be displayed

Technical Support

If you need assistance to get your unit functioning properly, please call Addonics Technical Support. Our technical staff will be happy to assist you, but they will need your help to do so. Calling the technical support staff without all the proper information can be both time consuming and frustrating. Here are some tips to help you out:

MODEL NUMBER – Please have this number on hand.

SYSTEM INFORMATION – Type of computer, peripherals, etc.

OPERATING SYSTEM – What version of Windows

WHAT'S THE TROUBLE? – Give enough information

about your problem so that we can recreate and diagnose it.

FREE Software Drivers for all Addonics Technologies Products are available 24 hours per day at the World Wide Web Site: www.addonics.com.

Contact Information

Phone: 408-573-8580

Fax: 408-573-8588

Email: <http://www.addonics.com/sales/query/>

Internet: <http://www.addonics.com>

TECHNICAL SUPPORT

Phone: 408-453-6212

Hours: 8:30 am - 6:00 pm PST

Email: <http://www.addonics.com/support/query/>